

J&R-0819 - Application No. 10/085,919

Response to Not. of Allow. 1/30/2006

Rule 312 Amendment submitted March 6, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (previously presented). A program-controlled unit, comprising:

a plurality of elements configured to selectively change a state thereof during program execution and to be connected to form one or more scan chains;

wherein the program-controlled unit, in response to a predetermined event detected during program execution, is configured to change into a state in which selected ones or all of said plurality of elements are no longer able to change a the state thereof , to subsequently connect the selected ones or all of said plurality of elements to one of more scan chains, and to read a content of the scan chains; and

an interface suitable for at least one of configuring and controlling parts of the program-controlled unit provided for identifying and/or analyzing errors that have occurred in the program-controlled unit from outside the program-controlled unit, said interface being configured to effect a connection of said elements to form a scan chain, and also to read from and write to the scan chain.

Claim 2 (previously presented). The program-controlled unit according to claim 1, which comprises an On-Chip Debug Support unit configured to monitor for an occurrence of the predetermined event.

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Claim 3 (original). The program-controlled unit according to claim 1, which comprises a clock generator for supplying respective units of the program-controlled unit with clock signals, and wherein the program-controlled unit is changed to a state in which selected ones or all of said elements that can be connected to form scan chains can no longer change their state by deactivating said clock generator.

Claim 4 (canceled).

Claim 5 (previously presented). The program-controlled unit according to claim 1, wherein said interface is configured for setting the predetermined event and a reaction of the program-controlled unit to the occurrence of the predetermined event.

Claim 6 (previously presented). The program-controlled unit according to claim 1, wherein said interface is configured to prompt for connection of said elements to form a scan chain, and also to read from and write to the scan chain.

Claim 7 (canceled).

Claim 8 (currently amended). An error determination method in a program-controlled unit using scan chains with a plurality of elements, which comprises executing the following method steps:

after a predetermined event has occurred during execution of a program by the program-controlled unit, in response to the predetermined event, placing the

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program-controlled unit into a state in which selected ones or all of the elements are no longer able to change the state thereof,

using an interface to connect the elements that are no longer able to change the state thereof to form the scan chains,

using the interface to read the scan chains, and

subsequently ~~using the interface to identify and analyze~~ Identifying and analyzing an error in the program-controlled unit from the state of the scan chains read ~~by~~ through the interface.

Claim 9 (canceled).

Claim 10 (previously presented). The method according to claim 8, which further comprises, in response to an occurrence of the predetermined event, changing the program-controlled unit over to a state in which selected ones or all elements that can be connected to form scan chains can no longer change their state.

Claim 11 (original). The method according to claim 8, which comprises reading data obtained upon reading the scan chains and comparing the data with data obtained when the scan chains in an error-free program-controlled unit are read under comparable conditions.

Claim 12 (previously presented). A program-controlled unit, comprising:

a plurality of elements configured to selectively change a state thereof during program execution and to be connected to form one or more scan chains;

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wherein the program-controlled unit, in response to a predetermined event detected during program execution, is configured to change into a state in which selected ones or all of said plurality of elements are no longer able to change the state thereof, to subsequently connect the selected ones or all of said plurality of elements to one or more scan chains, and to output a content of the scan chains; and

an interface suitable for controlling parts of the program-controlled unit provided for identifying and/or analyzing errors that have occurred in the program-controlled unit from outside the program-controlled unit, and for setting the predetermined event and a reaction of the program-controlled unit to the occurrence of the predetermined event.

Claim 13 (previously presented). A program-controlled unit, comprising:

a plurality of elements configured to selectively change a state thereof during program execution and to be connected to form one or more scan chains;

wherein the program-controlled unit, in response to a predetermined event detected during program execution, is configured to change into a state in which selected ones or all of said plurality of elements are no longer able to change the state thereof, to subsequently connect the selected ones or all of said plurality of elements to one or more scan chains, and to output a content of the scan chains; and

an interface suitable for at least one of configuring and controlling parts of the program-controlled unit provided for identifying and/or analyzing errors that have occurred in the program-controlled unit from outside the program-controlled unit, said

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interface being configured to prompt for or to effect a connection of said elements to form a scan chain, and also to read from and write to the scan chain.

Claim 14 (previously presented). The program-controlled unit according to claim 12, which comprises an On-Chip Debug Support unit configured to monitor for an occurrence of the predetermined event.

Claim 15 (previously presented). The program-controlled unit according to claim 12, which comprises a clock generator for supplying respective units of the program-controlled unit with clock signals, and wherein the program-controlled unit is changed to a state in which selected ones or all of said elements that can be connected to form scan chains can no longer change their state by deactivating said clock generator.

Claim 16 (previously presented). The program-controlled unit according to claim 13, which comprises an On-Chip Debug Support unit configured to monitor for an occurrence of the predetermined event.

Claim 17 (previously presented). The program-controlled unit according to claim 13, which comprises a clock generator for supplying respective units of the program-controlled unit with clock signals, and wherein the program-controlled unit is changed to a state in which selected ones or all of said elements that can be connected to form scan chains can no longer change their state by deactivating said clock generator.